

Pathways to Prevention (P2P)

A Report from the Federal Partners Meeting of the National Institutes of Health Pathways to Prevention Workshop: Achieving Health Equity in Preventive Services

February 24, 2020

Co-sponsored by:

National Institute on Minority Health and Health Disparities (NIMHD)
National Cancer Institute (NCI)
National Heart, Lung, and Blood Institute (NHLBI)
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
NIH Office of Disease Prevention (ODP)

Introduction

The Pathways to Prevention (P2P) program of the National Institutes of Health (NIH) Office of Disease Prevention (ODP) promotes the use of evidence-based practices to address complex public health issues by identifying research gaps and needs in specific topic areas. The goals of the P2P workshops are to synthesize and interpret the current evidence, identify research gaps, shape a research agenda, and develop an action plan (see [Appendix A](#) for a diagram detailing the process of the P2P program).

On June 19–20, 2019, the NIH convened the P2P Workshop: Achieving Health Equity in Preventive Services. This workshop was co-sponsored by the National Institute on Minority Health and Health Disparities (NIMHD), the National Cancer Institute (NCI), the National Heart, Lung, and Blood Institute (NHLBI), the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), and the ODP. This P2P workshop assessed the available scientific evidence to better understand how to achieve health equity in the use of clinical preventive services in a health care setting. An independent panel considered the systematic evidence review, invited presentations by experts in the field and public input, and developed a report with recommendations for moving the field forward. In February 2020, the [systematic evidence review](#),¹ [panel report](#),² and an [invited commentary](#)³ were published in the *Annals of Internal Medicine*. These publications are available on the [ODP website](#) along with other archived workshop materials and resources, including links to the video recordings of the expert presentations from the two-day workshop.⁴

As the final step in the P2P program process, the ODP convened a meeting on February 24, 2020, with representatives from federal government agencies (the Federal Partners) to identify strategies to address the recommendations in the P2P workshop panel report. This document summarizes the discussions and next steps identified at the Federal Partners Meeting.

Background

Chronic diseases, such as heart disease, cancer, and diabetes are responsible for seven of every 10 deaths among Americans each year and account for 75% of the nation's health spending.⁵ Many of these chronic conditions can be prevented, delayed, or detected and treated early when patients have access to and ways to work closely with their primary care providers. Greater use of proven clinical preventive services in the United States could avert the loss of millions of life-years and result in cost savings for individuals and families.⁶

Evidence-based guidelines recommending certain preventive services are developed by the U.S. Preventive Services Task Force (USPSTF), the Community Preventive Services Task Force (CPSTF), and the Health Resources and Services Administration's Bright Futures program to help all Americans stay healthy.^{7,8} Despite the proven value of preventive services such as various screenings, provider counseling, and preventive medications, implementation by providers and uptake by patients of these evidence-based practices vary.⁹ Demographic and geographic differences in the use of these services are significant and may contribute to racial and ethnic disparities in disease burden and life expectancy.¹⁰⁻¹²

It has been well established that social determinants of health (SDOH)—the social and physical environmental factors that shape and impact a person's health, such as health care system and language access barriers—impact the acceptance and use of preventive services among minority populations and in people with low socioeconomic status. However, limitations in the available data, insufficient evidence, and research gaps present challenges to the science of developing recommendations to increase the use of preventive services among specific groups.¹³ More research is required to understand the root causes of disparities in the use of preventive services and in patient acceptance of preventive service recommendations, as well as how barriers can be addressed through provider and community interventions. Additional areas for research include the role of health care systems to improve adoption and implementation of preventive services, and prospects for applying new technologies and communication innovations to close disparities.

Workshop Goals and Key Questions

This P2P workshop assessed the available scientific evidence on achieving health equity in the use of clinical preventive services in a health care setting, focusing on three leading causes of death in the United States: cancer, heart disease, and diabetes. Specifically, 10 preventive services for adults that are recommended by the USPSTF were addressed during the workshop:

- Abnormal blood glucose and type 2 diabetes mellitus screening
- Aspirin use to prevent cardiovascular disease (CVD) and colorectal cancer: preventive medication
- Behavioral counseling to promote healthful diet and physical activity for CVD prevention in adults with cardiovascular risk factors
- Breast cancer screening
- Cervical cancer screening
- Colorectal cancer screening

- High blood pressure screening
- Lung cancer screening
- Obesity screening and management
- Tobacco smoking cessation in adults: behavioral and pharmacotherapy interventions.

The workshop used the definitions of U.S. health disparity populations that were developed by the NIMHD for the NIH: Blacks/African Americans, Hispanics/Latinos, American Indians/Alaska Natives, Asian Americans, Native Hawaiians and other Pacific Islanders, socioeconomically disadvantaged populations, underserved rural populations, and sexual and gender minorities.¹⁴

The workshop was organized around the following key questions:

1. What is the effect of impediments and barriers on the part of providers to the adoption, promotion, and implementation of evidence-based preventive services that contribute to disparities in preventive services? Which of them are most common?
2. What is the effect of impediments and barriers on the part of populations adversely affected by disparities to the adoption, promotion, and implementation of evidence-based preventive services that contribute to disparities in preventive services? Which of them are most common?
3. What is the effectiveness of different approaches and strategies between providers and patients that connect and integrate evidence-based preventive practices for reducing disparities in preventive services?
4. What is the effectiveness of health information technologies and digital enterprises to improve the adoption, implementation, and dissemination of evidence-based preventive services in settings that serve populations adversely affected by disparities?
5. What is the effectiveness of interventions that health care organizations and systems implement to serve disparity populations to reduce disparities in preventive services use?

Systematic Evidence Review

A [systematic evidence review](#),¹⁵ guided by the key questions, was conducted by the Pacific Northwest Evidence-based Practice Center through a contract with the Agency for Healthcare Research and Quality (AHRQ) to inform the workshop discussion and was published in the *Annals of Internal Medicine*.¹ The purpose of the systematic evidence review was to summarize research on achieving health equity in 10 preventive services for cancer, CVD, and diabetes in adults by identifying effects of impediments and barriers that create disparities and effectiveness of interventions to reduce them. Key findings from the review are included in [Appendix B](#).

Panel Report

A unique feature of every P2P workshop is the involvement of a multidisciplinary, unbiased, independent panel comprised of non-federal representatives who have certified that they hold no scientific or personal conflicts with the subject matter of the P2P workshop for which they have volunteered their service. Panel members are charged with writing the P2P workshop panel report that (1) summarizes the key findings and research needs outlined in the systematic evidence review and presented at the workshop, and (2) provides a set of recommendations to

move the field forward. As noted above, the [Panel Report for the P2P Workshop: Achieving Health Equity in Preventive Services](#)² was published in the *Annals of Internal Medicine*. The panel's full list of 26 recommendations is provided in [Appendix C](#).

Federal Partners Meeting and Discussion

This meeting was convened on February 24, 2020, with representatives from federal government agencies (the Federal Partners), to review and discuss the findings and recommendations under four cross-cutting themes in the panel report (see [Appendix D](#) for the list of attendees and [Appendix E](#) for a list of Federal Partner initiatives and resources). Meeting objectives were to identify next steps for implementing many of the recommendations from the P2P workshop, prioritize action items, and set the stage for future collaborations.

The discussions and action items identified at the P2P Federal Partners Meeting on Achieving Health Equity in Preventive Services are summarized below.

1. Summary of Discussion of P2P Workshop Panel Recommendations for Theme 1: Integration of Services and New Delivery Models

1a. Brief Description of Theme 1: The following panel recommendations were discussed by the Federal Partners related to Integration of Services and New Delivery Models:

- Conduct research to improve the delivery of preventive services in populations with low health literacy, especially populations that have not been previously reported in the literature.
- Conduct research to test organizational and management interventions that may enable clinician leaders and practice managers to effectively implement disparity-reducing interventions.
- Conduct research to support clinicians and systems in prioritizing preventive services for each patient. This could include electronic health record (EHR) support or use of shared decision-making (SDM) tools based on potential health benefits and value that can be tailored to specific clinical settings as well as for individuals.
- Develop portable and adaptable decision-making tools to engage patients in preventive services across settings and conditions. Identify which types of tools are appropriate for which types of services. Determine if these tools should be used by allied health professionals or trained community health workers (CHWs).
- Develop and evaluate the impact of patient education and SDM tools on disparities; this work may be conducted in collaboration with third-party vendors and then integrated into clinical workflows, capitalizing on EHR data.
- Use process evaluations of navigation and CHW services and document training practices to increase understanding of the most effective and efficient components of navigation services.
- Develop and test navigation that is not test- or disease-specific for bundled preventive services across several conditions or tests.

1b. Specific Areas of Research Focus: CHWs play an important role in promoting the use of preventive services; however, the Centers for Medicare & Medicaid Services (CMS) typically does not reimburse services provided by CHWs. More research may be needed to support the business case for services provided by CHWs that will help CMS to receive the necessary statutory authority to make expanded reimbursement decisions. The Federal Partners also discussed the need for research that combines the use of EHR algorithms and CHWs to identify and reach patients who need preventive services. Additional research was also called for on the incentives and reimbursement rates for SDM tools that drive providers' behavior in preventive services, including those captured by the Healthcare Effectiveness Data and Information Set measures.

1c. Opportunities for Collaboration Among Federal Agencies, Resources, and Next Steps: The Federal Partners identified the following opportunities and available resources:

Community health workers:

- Opportunity for collaboration:
 - The U.S. Department of Health and Human Services (HHS) Office of Minority Health (OMH) in partnership with the U.S. Department of Housing and Urban Development (HUD) has a pilot project of CHWs providing health education and navigation services to public housing residents in Baltimore and Los Angeles. The CHWs are hired directly from among the public housing residents. CHWs are an important focus for HHS leadership, and this project could serve as a model for: (1) cross-sector (federal and local housing authority) collaboration to address the needs of the community; (2) providing economic and employment opportunities; and (3) improving access to social, health, and public health services such as preventive services to members of a specific community where they will benefit from this type of intervention.
- Resources:
 - [CPSTF recommendations, systematic reviews, and other resources on CHWs](#).¹⁶
 - [Alaska Community Health Aide Program \(CHAP\)](#): examine, evaluate, and assess its portability to other states.¹⁷
 - HHS OMH – HUD pilot project of CHWs providing health education and navigation services to public housing residents in Baltimore and Los Angeles (see Appendix for project description)
 - In September 2019, the National Institute of Nursing Research (NINR) sponsored the [Strengthening the Impact of Community Health Workers on HIV Care and Viral Suppression in the U.S. Conference](#) and released a trans-NIH related funding opportunity announcement (FOA) in March 2020: [RFA-NR-20-002: Strengthening the Impact of Community Health Workers on the HIV Care Continuum in the US \(R01 Clinical Trial Optional\)](#).^{18,19}
 - Patient-Centered Outcomes Research Institute (PCORI)-funded [studies on the effectiveness of CHWs](#).²⁰
 - [Penn Center for Community Health Workers](#).²¹

- AHRQ Technical Brief: [Impact of Community Health Worker Certification on Workforce and Service Delivery for Asthma and Other Selected Chronic Diseases](#).²²
- AHRQ Rapid Evidence Product: [Patient Navigation Models for Lung Cancer](#).²³

Social determinants of health (SDOH; more background information on SDOH is available online from HHS’s [Healthy People Initiative](#)²⁴ and the [World Health Organization](#)²⁵):

- Resources:
 - CMS is implementing a 10-item [Health-Related Social Needs Screening Tool](#) for patients upon post-acute care discharge.^{26,27}
 - AHRQ has funded three projects focused on bringing together data on chronic disease, SDOH, and community services into a dashboard for primary care practices to connect patients and needed services; results will be available within a year or two.
 - AHRQ’s [EvidenceNow](#) 2.0 initiative will focus on the [Aspirin](#) for secondary prevention, [Blood pressure control](#), [Cholesterol management](#), and [Smoking cessation](#) (ABCS) of CVD prevention and will build partnerships between primary care and public health.²⁸
 - A [Health Affairs article](#) was published in 2018 on American’s receipt of high-priority clinical preventive services.²⁹
 - Leverage a possible U.S. Department of Veterans Affairs (VA) request for proposals to fund research on multicomponent prevention patient navigation.
 - The USPSTF’s [Electronic Preventive Services Selector \(ePSS\) application](#) for clinicians; a new version for patients is currently under development.³⁰
 - Leverage the work of the U.S. Environmental Protection Agency (EPA) on SDOH topics when developing new initiatives.
 - The [Phenotypes and eXposures \(PhenX\) Toolkit](#) now includes a [collection of measures on SDOH](#).^{31,32}

Health literacy:

- Resources:
 - AHRQ Special Emphasis Notice (SEN) [NOT-HS-20-009](#): AHRQ Announces Interest in Research on Improving Organizational Health Literacy to Prevent and Manage Chronic Disease.³³
 - The CMS [From Coverage to Care](#) initiative helps patients understand their health coverage and connects them to primary care and appropriate preventive services.³⁴

Shared decision-making (SDM):

- Resources:
 - AHRQ SEN [NOT-HS-16-010](#): AHRQ Announces Interest in Research that Uses Shared Decision Making as a Tool to Improve the Quality of Care for Low Income and Racial and Ethnic Minority Patients.³⁵
 - AHRQ’s [Clinical Decision Support \(CDS\) Connect](#) is an online data repository of CDS tools’ artifacts and includes an authoring tool for writing EHR prompts for clinical guidelines.³⁶

- AHRQ’s [SHARE Approach](#) is a generic, agnostic five-step method for making decisions with patients.³⁷
- CPSTF evidence reviews on e-communications and other portable and adaptable SDM tools for advising patients on blood pressure control and quitting smoking:
 - [Cardiovascular Disease: Self-Measured Blood Pressure Monitoring Interventions for Improved Blood Pressure Control – When Combined with Additional Support](#).³⁸
 - [Cardiovascular Disease: Interactive Digital Interventions for Blood Pressure Self-Management](#).³⁹
 - [Cardiovascular Disease: Self-Measured Blood Pressure Monitoring Interventions for Improved Blood Pressure Control – When Used Alone](#).⁴⁰
 - [Cardiovascular Disease: Clinical Decision-Support Systems \(CDSS\)](#).⁴¹
 - [Tobacco Use and Secondhand Smoke Exposure: Mass-Reach Health Communication Interventions](#).⁴²
 - [Tobacco Use and Secondhand Smoke Exposure: Mobile Phone-Based Cessation Interventions](#).⁴³
 - [Tobacco Use and Secondhand Smoke Exposure: Internet-based Cessation Interventions](#).⁴⁴
- NCI has a suite of apps on [smokefree.gov](#) to help people stop smoking.⁴⁵
- VA-funded project: [Incorporating Veterans Preferences Into Lung Cancer Screening Decisions](#).⁴⁶

Implementation science:

- Resources:
 - Trans-NIH FOAs on Dissemination and Implementation Research in Health: [PAR-19-274](#) (R01 Clinical Trial Optional), [PAR-19-275](#) (R21 Clinical Trial Optional), and [PAR-19-276](#) (R03 Clinical Trial Not Allowed).⁴⁷⁻⁴⁹
 - EPA’s [Smoke-Ready Toolbox for Wildfires](#).⁵⁰

2. Summary of Discussion of P2P Workshop Panel Recommendations for Theme 2: Need for Innovative Methods

2a. Brief Description of Theme 2: The following panel recommendations were discussed by the Federal Partners related to the Need for Innovative Methods:

- Conduct broadly implemented intervention studies that are sufficiently large to allow heterogeneity of treatment effect analyses for persons at risk for underuse of preventive services and that allow for assessments of the combined associations of several factors (intersectionality).
- Identify social barriers to preventive services in care systems and broad community characteristics that facilitate or hamper use of services.
- Conduct methods research to identify the outcome measures that are most appropriate for assessing bundled approaches to preventive services. These may include decisional quality, health literacy, patient adherence, and patient–provider communication.

- Conduct research to determine whether the success in improving use of preventive services for cancer in at-risk populations can be replicated for other conditions.
- Conduct studies in settings where at-risk populations are commonly treated by using pragmatic trial and implementation science designs.
- Develop and use efficient process measures of the quality of patient–provider interaction and communication, informed decision-making, and decision quality to inform provider–patient discussions of preventive services.

2b. Specific Areas of Research Focus: The Federal Partners discussed several areas where more research related to innovative methods is needed. A common theme mentioned was the need for more methods development research, particularly in adaptive trial designs. The research community should consider adapting methods from complexity science to spur the development of complex system interventions. Furthermore, under-resourced areas such as rural communities may be understudied; research translation is needed to ensure all communities benefit from effective interventions for increasing the uptake of appropriate preventive services. In the area of implementation science, research on the health effects of environmental changes and policy interventions is needed to better understand where the barriers are to increasing preventive service use. The Federal Partners also discussed the need to better capture the costs of interventions given that the costs of an intervention are important factors in implementation and the ability to impact population health. Additionally, more community-engaged researchers are needed that give members of the impacted communities an active role in developing interventions or other programs related to the use of preventive services. More disease-agnostic research and research that cuts across disease areas and the lifespan are needed on SDOH; however, the Federal Partners recognized that this is a challenge for the NIH given that many of the NIH’s 27 Institutes, Centers, and Offices (ICs) were created to advance a specific research agenda related to particular diseases or body systems. More work is needed to identify successful strategies for adapting evidence-based interventions for different communities while maintaining their effectiveness. The Federal Partners also called for more research on medical access issues experienced by people with disabilities because this is another population that experiences underutilization of preventive services.

2c. Opportunities for Collaboration Among Federal Agencies, Resources, and Next Steps: The Federal Partners identified the following opportunities and available resources:

Implementation science and process measures:

- Opportunities for collaboration:
 - The Centers for Disease Control and Prevention (CDC) [Prevention Research Centers](#) includes a CDC and NCI collaboration on cancer screening.⁵¹
 - A workshop or webinar series on promoting implementation science for prevention, like NCI’s [Implementation Science Consortium in Cancer \(ISCC\)](#).⁵²
 - HHS OMH has discretionary funds for developing [demonstration projects](#) to identify the effectiveness of implementation strategies within at-risk communities.⁵³

- FOA [RFA-DK-20-002](#): NIDDK Centers for Diabetes Translation Research (P30 Clinical Trial Optional).⁵⁴
- Resources:
 - AHRQ's [EvidenceNow](#) 2.0 initiative will focus on the ABCS of CVD prevention and will build partnerships between primary care and public health.²⁸
 - AHRQ's [TAKEheart](#) initiative aims to increase the number of patients who receive cardiac rehabilitation services through implementation strategies.⁵⁵
 - CDC's [Childhood Obesity Research Demonstration \(CORD\) Project](#) 3.0.⁵⁶
 - The [Cancer Prevention and Control Research Network \(CPCRN\)](#) is evaluating cancer screening services and processes among Federally Qualified Health Centers.⁵⁷
 - CDC's [Prevention Research Centers](#) includes a CDC and NCI collaboration on cancer screening.⁵¹
 - NCI-funded [Implementation Science Centers in Cancer Control \(ISC³\)](#).⁵⁸
 - A workshop or webinar series on promoting implementation science for prevention, like NCI's [ISCC](#).⁵²
 - NHLBI FOAs on the Disparities Elimination through Coordinated Interventions to Prevent and Control Heart and Lung Disease Risk (DECIPHER) initiative: [RFA-HL-20-003](#) (UG3/UH3 Clinical Trial Optional) and [RFA-HL-20-004](#) Research Coordinating Center (RCC) (U24 Clinical Trial Not Allowed).^{59,60}
 - HHS OMH discretionary funds for developing [demonstration projects](#).⁵³
 - FOA [RFA-DK-20-002](#): NIDDK Centers for Diabetes Translation Research (P30 Clinical Trial Optional).⁵⁴

Large studies, intersectionality, and social barriers:

- Resources:
 - NCI's [Population-based Research to Optimize the Screening Process \(PROSPR\)](#) research network is focused on improving the cancer screening process in community health care settings.⁶¹
 - CDC, NIDDK, and PCORI consortium of natural experiment projects/grantees: [Natural Experiments for Translation in Diabetes 2.0 \(NEXTD-2\) Study](#).⁶²
 - Leverage lessons learned from NIDDK-funded projects submitted to [PAR-17-178](#): Evaluating Natural Experiments in Healthcare to Improve Diabetes Prevention and Treatment (R18).⁶³
 - Leverage the HHS-led [Ending the HIV Epidemic initiative](#) to help communities overcome the barriers that keep them from utilizing the evidence-based intervention of pre-exposure prophylaxis (PrEP) for HIV prevention through addressing community engagement and addressing stigma.⁶⁴ The recommendations on addressing stigma and community engagement as key strategies to ending the HIV epidemic in racial and ethnic minority communities, developed by the OMH Advisory Committee on Minority Health could be applicable to other preventive services.
 - CMS is developing a tool using Medicare claims data to estimate the costs associated with [inequitable usage of preventive services](#).^{65,66}

Methods research and support in other disease areas:

- Opportunities for collaboration:
 - A workshop may be needed to identify consistent outcome measures appropriate for bundled approaches in delivering preventive services.
 - CMS leads a trans-federal workgroup that coordinates efforts around disabilities.
- Resource:
 - CMS leads a trans-federal workgroup that coordinates efforts around disabilities.

3. Summary of Discussion of P2P Workshop Panel Recommendations for Theme 3: Community Engagement and Systems Approaches

3a. Brief Description of Theme 3: The following panel recommendations were discussed by the Federal Partners related to Community Engagement and Systems Approaches:

- Conduct research to test methods for identifying and reaching out to people seeking care (e.g., at urgent care clinics) who are in need of clinical preventive services but have not been engaged in a system of care, ensuring access to care for everyone.
- Conduct studies that describe community contexts in which interventions take place; characterize the at-risk population that is the subject of the intervention in terms of key demographic, clinical, and cultural factors; indicate the types of stakeholder engagement in the intervention; and use standard descriptions.
- Collaborate with community organizations that address SDOH and local preferences, and document interventions to aid replication.
- Identify mechanisms for addressing cross-cutting, underlying SDOH that contribute to unequal access to and delivery of services, especially upstream social determinants.
- When designing interventions to address disparities, seek cross-sector collaborations that incorporate the clinical care system, public health, and community-based organizations.

3b. Specific Areas of Research Focus: The Federal Partners discussed several areas where more research is needed related to the Community Engagement and Systems Approaches theme of the panel's recommendations. A systematic evidence review is needed detailing how health care systems are integrating with social institutions like schools to understand and address SDOH that impact the health of students. Agencies should act on opportunities to embed community involvement throughout the research continuum, from research conception (e.g., identification of the problem, research questions, methods) through the end of the process (i.e., dissemination of results) beyond the investigators who conduct community-based participatory research. Additionally, funding opportunities should consider requiring that stakeholders from social service systems (e.g., criminal justice, child welfare) be included on the research team to help investigators recruit these hard to reach populations who would not otherwise be seeking medical care in research studies. Furthermore, additional studies are needed that are conducted in non-traditional, but health-relevant settings (e.g., faith-based organizations, supermarkets, salons/barber shops) and locations where people spend time and perceive to receive information from trusted sources. Community-based or engaged studies are appropriate for testing interventions that leverage CHWs; however, best practices and lessons

from a plethora of CHW programs and evidence should be leveraged to improve outcomes so that unproven or unsuccessful strategies are not promulgated.

3c. Opportunities for Collaboration Among Federal Agencies, Resources, and Next Steps: The Federal Partners identified the following opportunities and available resources:

- Opportunities for collaboration:
 - EPA is looking for co-sponsors on a student video project on how EPA’s [Smoke-Ready Toolbox for Wildfires](#) can be used by communities.⁵⁰
 - CMS is interested in implementation research that was promoted by the Affordable Care Act (ACA) to study access to preventive services that have low uptake in communities; this represents an opportunity for collaboration with implementation science to understand provider and community acceptance and engagement.
- Resources:
 - 2020 [Health Affairs article](#) on health systems’ investment in SDOH.⁶⁷
 - EPA is looking for co-sponsors on a student video project on how EPA’s [Smoke-Ready Toolbox for Wildfires](#) can be used by communities.⁵⁰
 - Each National Center for Advancing Translational Sciences (NCATS)-funded Clinical and Translational Science Awards (CTSA) hub has a community engagement core; CTSA hubs have supported [projects on rural health](#).⁶⁸
 - National Institute on Drug Abuse (NIDA)-funded community partnership models include: [Communities That Care](#), the [HEALing Communities Study](#), and the [PROmoting School-community-university Partnerships to Enhance Resilience \(PROSPER\)](#) initiative.⁶⁹⁻⁷¹
 - The [PhenX Toolkit](#) now includes a [collection of measures on SDOH](#).^{31,32}
 - [National Institute of Environmental Health Sciences \(NIEHS\) Translational Research Framework](#).⁷²
 - The [Accountable Health Communities Model](#) of CMS.²⁶
 - Examples of community-engaged partnership models:
 - [Building Infrastructure Leading to Diversity \(BUILD\) Health Challenge](#)^{73,74}
 - [Community Information Exchange San Diego](#)⁷⁵
 - Leverage lessons from the [NCI Community Oncology Research Program \(NCORP\)](#), especially NCORP’s tobacco cessation efforts⁷⁶
 - NHLBI FOAs on the Disparities Elimination through Coordinated Interventions to Prevent and Control Heart and Lung Disease Risk (DECIPHeR) initiative: [RFA-HL-20-003](#) (UG3/UH3 Clinical Trial Optional) and [RFA-HL-20-004](#) Research Coordinating Center (RCC) (U24 Clinical Trial Not Allowed).^{59,60}
- Next step:
 - Examine the requirements of the ACA to address SDOH.

4. Summary of Discussion of P2P Workshop Panel Recommendations for Theme 4: Workforce Development and Training

4a. Brief Description of Theme 4: The following panel recommendations were discussed by the Federal Partners related to Workforce Development and Training:

- Conduct research investigating the effect of investing in new health workforce training approaches for reducing bias related to patient interactions around preventive services, and the effect of such interventions on health disparities.
- Conduct studies on how to sustain interinstitutional partnerships focused on increasing the use of preventive services across primary care and integrated delivery systems, including sharing of information, educational initiatives, and inclusion of non-traditional providers.

4b. Specific Areas of Research Focus: The Federal Partners discussed several areas where more research is needed related to the panel’s recommendations for the theme of Workforce Development and Training. More information is needed on which components of diversity and inclusion training are most effective for developing training programs that will have the most impact in reducing bias among health care providers. Agencies should consider requiring grantees to include diversity and inclusion training in their workforce development programs. The Federal Partners called for more community-engaged researchers under Theme 2—Need for Innovative Methods—which was also discussed in this part of the meeting.

4c. Opportunities for Collaboration Among Federal Agencies, Resources, and Next Steps: The Federal Partners identified the following opportunities and available resources:

- Opportunities for collaboration:
 - CMS is currently developing a diversity training program for providers and is open for consultation to ensure all areas are addressed.
 - HHS has convened a stigma working group and the NIH has a [Stigma Scientific Interest Group](#).⁷⁷
- Resources:
 - The American Academy of Family Physicians (AAFP) developed an [implicit bias training guide](#) as part of the AAFP’s EveryONE Project.⁷⁸
 - HHS OMH’s [Youth Health Equity Model of Practice \(YHEMOP\)](#) program provides Health Equity Fellowships to undergraduate, graduate, and doctoral students interested in pursuing a career in health.⁷⁹
 - CMS is currently developing a diversity training program for providers and is open for consultation to ensure all areas are addressed.
 - The [Medicare Learning Network \(MLN\)](#) of CMS can be used for dissemination efforts.⁸⁰
 - The [Association of American Medical Colleges \(AAMC\)](#) offers professional development resources and a webinar series.⁸¹
 - The New York City Department of Health and Mental Hygiene developed a training program that may serve as a good model.
 - The NIH Center for Scientific Review is incorporating bias training into the orientation process for peer reviewers.
 - NCI’s [National Outreach Network \(NON\)](#) has a training for community health educators on disseminating culturally appropriate and evidence-based materials.⁸²
 - HHS has convened a stigma working group and the NIH has a [Stigma Scientific Interest Group](#).⁷⁷
 - NIH-funded training, workforce development, and diversity initiatives include:

- [BUILD](#).⁷⁴
- [Maximizing Opportunities for Scientific and Academic Independent Careers \(MOSAIC\)](#).⁸³
- NIH Scientific Workforce Diversity (SWD) Office resources are available on the [NIH SWD website](#), including the [NIH SWD Toolkit](#).^{84,85}

Conclusions and Next Steps

The Federal Partners ended their meeting by categorizing next steps for research activities related to achieving health equity in preventive services based on priority and readiness for action:

- Immediate steps (within the next year):
 - Review the CPSTF’s systematic evidence reviews on CHWs to assess the characteristics of successful CHW interventions included in the source articles; findings from this activity will spur further collaborative action. (Theme 1)
 - Obtain more information on [Alaska CHAP](#); examine, evaluate, and assess its portability to other states.¹⁷ (Theme 1)
 - Obtain more information on HHS OMH’s partnership with HUD and determine what data they are collecting. (Theme 1)
 - Explore if FOA [RFA-NR-20-002](#) is a useful model for other FOAs on CHWs.¹⁸ (Theme 1)
 - Review the *Health Affairs* articles that the Federal Partners discussed. (Theme 3)
 - Examine the ACA requirements that address SDOH. (Theme 3)
 - Use the [Interdepartmental Health Equity Collaborative \(IHEC\)](#) to explore interest in having the participating federal agencies collaborate on one large SDOH-related program that would embed CHW training and allow each agency to fund different components of the project.⁸⁶ (Theme 3)
 - Disseminate information about EPA’s [Smoke-Ready Toolbox for Wildfires](#) student video competition and consider partnering with EPA to sponsor longer-term projects that expand the exploratory work funded through the competition.⁵⁰ (Theme 3)
 - Collect and leverage best practices from the examples of community-engaged partnership models listed above. (Theme 3)
 - Leverage the resources listed above to learn more about existing programs on reducing bias. (Theme 4)
- Medium-range steps (within one to two years):
 - Explore ways to connect AHRQ’s [EvidenceNow](#) 2.0 initiative grantees with other public health efforts occurring in the communities where the grantees are located.²⁸ (Theme 1)
 - Convene a workshop to identify consistent outcome measures appropriate for bundled approaches in delivering preventive services. (Theme 2)
 - Develop a set of minimum requirements for SDOH measures and research activities to be included in FOAs. (Theme 2)
 - Conduct a systematic evidence review on how health systems are integrating with institutions with SDOH missions and core activities (e.g., housing, education) to determine best practices and identify research gaps. (Theme 3)

- Share the results of NCATS' [environmental scan of the available health disparities resources identified in communities with a CTSA-funded medical research institution](#).⁶⁸ (Theme 3)
- Explore collaboration opportunities with HHS OMH's [YHEMOP](#) program.⁷⁹ (Theme 4)
- Long-term steps (within three to five years or longer):
 - Work through the [IHEC](#) to identify interest among its participating agencies on collaboratively developing and implementing a large-scale SDOH study that embeds best health disparity-reducing strategies like CHWs.⁸⁶ (Theme 3)

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Appendix A: P2P Program Process



***Responsible Party** [Agency for Healthcare Research and Quality (AHRQ); Evidence-based Practice Centers (EPC); Institutes and Centers (IC); Office of Disease Prevention (ODP)]

Appendix B: Systematic Evidence Review Key Findings

A [systematic evidence review of the scientific literature](#),¹⁵ focusing on the key questions, was conducted by the Pacific Northwest Evidence-based Practice Center through a contract with AHRQ to facilitate the workshop discussion and was published in the *Annals of Internal Medicine*.¹ The purpose of the systematic evidence review was to summarize research on achieving health equity in 10 preventive services for cancer, CVD, and diabetes in adults by identifying effects of impediments and barriers that create disparities and effectiveness of interventions to reduce them. Key findings from the review were:

- No eligible studies evaluated effects of provider barriers.
- Evidence is low or insufficient for effects of population barriers, including insurance, access, age, rural location, income, language, health literacy, country of origin, and attitudes.
- Screening rates are higher with patient navigation for colorectal, breast, and cervical cancer; telephone calls and prompts for colorectal cancer; and reminders with lay health workers for breast cancer.
- Evidence is low or insufficient for other interventions due to the lack of studies or their limitations.

The [systematic evidence review of the scientific literature](#)¹⁵ identified the following recommendations for future research that, if addressed, would further the scientific knowledge on achieving health equity in 10 preventive services for cancer, CVD, and diabetes in adults:

- Future research is needed to address gaps and deficiencies of existing studies.
- Additional research on unstudied populations experiencing adverse effects of health care disparities would include racial, ethnic, and socioeconomically disadvantaged populations, underserved rural populations, sexual and gender minority populations, and others subject to discrimination.
- Studies should expand to include more than one site or geographic region to improve statistical power for subgroup comparisons and improve understanding of similarities and differences across defined groups.
- Members of the target population should be involved in planning studies to inform the study design, interventions, and outcome measures.
- Studies evaluating interventions found to be successful in existing studies, such as patient navigation or clinician-linked outreach and education, should be extended to additional populations and settings.
- Additional research is needed to evaluate the effectiveness of interventions to reduce disparities for preventive services that have not been addressed by existing studies, including CVD and diabetes.

Appendix C: P2P Workshop Panel Recommendations

Not all of the panel recommendations were discussed during the Federal Partners Meeting. *Table 2. Summary of Workshop Panel Recommendations for Future Research to Reduce Disparities in Preventive Services Use* from the [Workshop Panel Report for the P2P Workshop: Achieving Health Equity in Preventive Services](#)² is reposted below with the panel’s full list of recommendations.

Key Questions/Themes	Recommendations
<p>Key question 1: What is the effect of impediments and barriers on the part of providers to the adoption, promotion, and implementation of evidence-based preventive services that contribute to disparities in preventive services? Which of them are most common?</p>	<p>1.1 Develop standard definitions and metrics of “provider barriers and impediments” and research to assess their impact on the adoption and promotion of evidence-based preventive services specific to at-risk population groups.</p> <p>1.2 Conduct research investigating the effect of investing in new health workforce training approaches for reducing bias related to patient interactions around preventive services, and the effect of such interventions on health disparities.</p>
<p>Key question 2: What is the effect of impediments and barriers on the part of populations adversely affected by disparities to the adoption, promotion, and implementation of evidence-based preventive services that contribute to disparities in preventive services? Which of them are most common?</p>	<p>2.1 Conduct broadly implemented intervention studies that are sufficiently large to allow heterogeneity of treatment effect analyses for persons at risk for underuse of preventive services and that allow for assessments of the combined associations of several factors (intersectionality).</p> <p>2.2 Conduct research to improve delivery of preventive services in populations with low health literacy, especially populations that have not been previously reported in the literature.</p> <p>2.3 Identify social barriers to preventive services in care systems and broad community characteristics that facilitate or hamper use of services.</p>
<p>Key question 3: What is the effectiveness of different approaches and strategies between providers and patients that connect and integrate evidence-based preventive practices for reducing disparities in preventive services?</p>	<p>3.1 Conduct research to test organizational and management interventions that may enable clinician leaders and practice managers to effectively implement disparity-reducing interventions.</p> <p>3.2 Conduct research to support clinicians and systems in prioritizing preventive services for each patient. This could include EHR support or use of shared decision-making tools based on potential health benefits and value that can be tailored to specific clinical settings as well as for individuals.</p> <p>3.3 Develop portable and adaptable decision-making tools to engage patients in preventive services across settings and conditions. Identify which types of tools are appropriate for which types of services. Determine if these tools should be used by allied health professionals or trained community health workers.</p> <p>3.4 Conduct methods research to identify the outcome measures that are most appropriate for assessing</p>

Key Questions/Themes	Recommendations
	<p>bundled approaches to preventive services. These may include decisional quality, health literacy, patient adherence, and patient–provider communication.</p> <p>3.5 Develop and evaluate the impact of patient education and shared decision-making tools on disparities; this work may be conducted in collaboration with third-party vendors and then integrated into clinical workflows, capitalizing on EHR data.</p>
<p>Key question 4: What is the effectiveness of health information technologies and digital enterprises to improve the adoption, implementation, and dissemination of evidence-based preventive services in settings that serve populations adversely affected by disparities?</p>	<p>4.1 Fully embed HIT studies in the health care system. Ensure that their relationship to other components of systems interventions, such as provider education or patient navigation, is sufficiently described so as to allow replication. Testing intervention effectiveness may involve alternatives to traditional randomized trials.</p> <p>4.2 Document the process of implementing HIT interventions, because it is critical for the clinical community to understand the time, personnel, and infrastructure required for implementation. Interventions should be informed by engagement with stakeholders, documenting the mode of communication (email, portal, smartphone, text, etc.) as well as the frequency of contact, language used, and other factors.</p> <p>4.3 Develop methods for ensuring that HIT technologies used outside the EHR have capacity to transfer information back to EHR systems, including interoperability across health systems. Early-phase studies may not need to close this information loop, but full implementation should include this step.</p> <p>4.4 In current and future HIT-related research, conduct analysis of large EHR-derived and other databases to more accurately identify persons in need of intensive outreach and navigation. Artificial intelligence techniques may be particularly useful in this context. Such interventions should be well documented and monitored for unintended consequences of worsening disparities through misclassification of patients or bias included in such models, as well as the potential for creating distrust among stakeholders.</p>
<p>Key question 5: What is the effectiveness of interventions that health care organizations and systems implement to serve disparity populations to reduce disparities in preventive services use?</p>	<p>5.1 Conduct research to test methods for identifying and reaching out to people seeking care (e.g., at urgent care clinics) who are in need of clinical preventive services but have not been engaged in a system of care, ensuring access to care for everyone.</p> <p>5.2 Conduct research to determine whether the success in improving use of preventive services for cancer in at-risk populations can be replicated for other conditions.</p>

Key Questions/Themes	Recommendations
	<p>5.3 Conduct studies on how to sustain interinstitutional partnerships focused on increasing the use of preventive services across primary care and integrated delivery systems, including sharing of information, educational initiatives, and inclusion of non-traditional providers.</p>
<p>Cross-cutting theme 1: Community engagement and systems approaches</p>	<p>CC1.1 Conduct studies that describe community contexts in which interventions take place; characterize the at-risk population that is the subject of the intervention in terms of key demographic, clinical, and cultural factors; indicate the types of stakeholder engagement in the intervention; and use standard descriptions.</p> <p>CC1.2 Collaborate with community organizations that address social determinants of health and local preferences, and document interventions to aid replication.</p> <p>CC1.3 Identify mechanisms for addressing cross-cutting, underlying social determinants of health that contribute to unequal access to and delivery of services, especially upstream social determinants.</p> <p>CC1.4 When designing interventions to address disparities, seek cross-sector collaborations that incorporate the clinical care system, public health, and community-based organizations.</p>
<p>Cross-cutting theme 2: Integration of services and new delivery models</p>	<p>CC2.1 Use process evaluations of navigation and community health worker services and document training practices to increase understanding of the most effective and efficient components of navigation services.</p> <p>CC2.2 Develop and test navigation that is not test- or disease-specific for bundled preventive services across several conditions or tests.</p>
<p>Cross-cutting theme 3: Need for innovative methods</p>	<p>CC3.1 Conduct studies in settings where at-risk populations are commonly treated by using pragmatic trial and implementation science designs.</p> <p>CC3.2 Build financial and staffing sustainability considerations into these studies.</p> <p>CC3.3 Develop and use efficient process measures of the quality of patient–provider interaction and communication, informed decision-making, and decision quality to inform provider–patient discussions of preventive services.</p>

Appendix D: Federal Partners Meeting Participants

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Appendix E: Federal Partner Initiatives and Resources Relevant to Achieving Health Equity in Preventive Services

Agency for Healthcare Research and Quality (AHRQ)	
	Clinical Decision Support (CDS) Connect ³⁶
	Consumer Assessment of Healthcare Providers and Systems (CAHPS) Health Literacy Item Sets ⁸⁷
	Electronic Preventive Services Selector (ePSS) ³⁰
	EvidenceNow: Advancing Heart Health in Primary Care ²⁸
	Impact of Community Health Worker Certification on Workforce and Service Delivery for Asthma and Other Selected Chronic Diseases ²²
	National Healthcare Quality and Disparities Reports ⁸⁸
	Patient Navigation Models for Lung Cancer ²³
	The SHARE Approach ³⁷
	TAKEheart: AHRQ's Initiative to Increase Use of Cardiac Rehabilitation ⁵⁵
	AHRQ Funding Opportunity Announcements (FOAs): <ul style="list-style-type: none"> • NOT-HS-16-010: AHRQ Announces Interest in Research that Uses Shared Decision Making as a Tool to Improve the Quality of Care for Low Income and Racial and Ethnic Minority Patients³⁵ • NOT-HS-20-009: Special Emphasis Notice (SEN): AHRQ Announces Interest in Research on Improving Organizational Health Literacy to Prevent and Manage Chronic Disease³³ • RFA-HS-20-002: Supporting Primary Care to Advance Cardiovascular Health in States with High Prevalence of Preventable CVD Events (U18)⁸⁹
Centers for Disease Control and Prevention (CDC)	
	Cancer Prevention and Control Research Network (CPCRN) ⁵⁷
	Childhood Obesity Research Demonstration (CORD) Project 3.0 ⁵⁶
	Community Preventive Services Task Force (CPSTF) Resources on Community Health Workers (CHWs) ¹⁶
	CPSTF Resources on Shared Decision-Making (SDM) Tools: <ul style="list-style-type: none"> • Cardiovascular Disease: Self-Measured Blood Pressure Monitoring Interventions for Improved Blood Pressure Control – When Combined with Additional Support³⁸ • Cardiovascular Disease: Interactive Digital Interventions for Blood Pressure Self-Management³⁹ • Cardiovascular Disease: Self-Measured Blood Pressure Monitoring Interventions for Improved Blood Pressure Control – When Used Alone⁴⁰ • Cardiovascular Disease: Clinical Decision-Support Systems (CDSS)⁴¹ • Tobacco Use and Secondhand Smoke Exposure: Mass-Reach Health Communication Interventions⁴² • Tobacco Use and Secondhand Smoke Exposure: Mobile Phone-Based Cessation Interventions⁴³

<ul style="list-style-type: none"> • Tobacco Use and Secondhand Smoke Exposure: Internet-based Cessation Interventions⁴⁴
Natural Experiments for Translation in Diabetes 2.0 (NEXTD-2) Study ⁶²
Prevention Research Centers ⁵¹
Centers for Medicare & Medicaid Services (CMS)
The Accountable Health Communities Health-Related Social Needs Screening Tool ²⁷
Accountable Health Communities Model ²⁶
From Coverage to Care ³⁴
The Medicare Learning Network ⁸⁰
U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
The Environmental Justice Collaborative Problem-Solving Cooperative Agreement Program ⁹⁰
Smoke-Ready Toolbox for Wildfires ⁵⁰
National Institutes of Health (NIH)
<p>Pathways to Prevention (P2P) Workshop Materials:</p> <ul style="list-style-type: none"> • Panel Report² • Invited Commentary³ • Systematic Evidence Review Article¹ • Systematic Evidence Review Report¹⁵ • Archived Workshop Proceedings and Other Resources⁴
Building Infrastructure Leading to Diversity (BUILD) Initiative ⁷⁴
Clinical and Translational Science Awards (CTSA) Program Rural Health Efforts ⁶⁸
HEALing Communities Study ⁷⁰
Implementation Science Centers in Cancer Control (ISC³) ⁵⁸
Implementation Science Consortium in Cancer ⁵²
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) (K99/R00 and UE5) ⁸³
National Outreach Network (NON) ⁸²
National Cancer Institute (NCI) Community Oncology Research Program (NCORP) ⁷⁶
Phenotypes and eXposures (PhenX) Toolkit ³¹ <ul style="list-style-type: none"> • PhenX Social Determinants of Health Collections³²
Population-based Research to Optimize the Screening Process (PROSPR) ⁶¹
Scientific Workforce Diversity (SWD) Office ⁸⁴ <ul style="list-style-type: none"> • NIH SWD Toolkit⁸⁵
Smokefree.gov ⁴⁵
Stigma Scientific Interest Group ⁷⁷
Strengthening the Impact of Community Health Workers on HIV Care and Viral Suppression in the U.S. Conference ¹⁸
Translational Research Framework ⁷²

NIH FOAs:

- [NOT-DA-20-033](#): Notice of Special Interest (NOSI): HEAL Initiative: Social Network Analyses to Reduce American Indian and Alaska Native Opioid Use Disorder and Related Risks for Suicide and Mental Health Disorders⁹¹
- [PA-18-826](#): Exploratory Analyses of Adherence Strategies and Data Sets from CALERIE to Investigate Behavioral and Psychosocial Aspects of Sustained Caloric Restriction in Humans (R21 Clinical Trial Not Allowed)⁹²
- [PA-18-849](#): Prevention Research in Mid-Life Adults (R01 Clinical Trial Optional)⁹³
- [PA-18-850](#): Prevention Research in Mid-Life Adults (R21 Clinical Trial Optional)⁹⁴
- [PAR-17-178](#): Evaluating Natural Experiments in Healthcare to Improve Diabetes Prevention and Treatment (R18)⁶³
- [PAR-17-464](#): Research to Improve Native American Health (R21 Clinical Trials Optional)⁹⁵
- [PAR-17-496](#): Intervention Research to Improve Native American Health (R01 Clinical Trial Optional)⁹⁶
- [PAR-19-274](#): Dissemination and Implementation Research in Health (R01 Clinical Trial Optional)⁴⁷
- [PAR-19-275](#): Dissemination and Implementation Research in Health (R21 Clinical Trial Optional)⁴⁸
- [PAR-19-276](#): Dissemination and Implementation Research in Health (R03 Clinical Trial Not Allowed)⁴⁹
- [RFA-AG-20-045](#): Tailoring Interventions to Improve Preventive Health Service Use (R61/R33 Clinical Trial Required)⁹⁷
- [RFA-DK-20-002](#): NIDDK Centers for Diabetes Translation Research (P30 Clinical Trial Optional)⁵⁴
- [RFA-HL-20-003](#): Disparities Elimination through Coordinated Interventions to Prevent and Control Heart and Lung Disease Risk (DECIPHeR) (UG3/UH3 Clinical Trial Optional)⁵⁹
- [RFA-HL-20-004](#): Disparities Elimination through Coordinated Interventions to Prevent and Control Heart and Lung Disease Risk (DECIPHeR) – Research Coordinating Center (RCC) (U24 Clinical Trial Not Allowed)⁶⁰
- [RFA-HL-21-011](#): Stimulating T4 Implementation Research to Optimize Integration of Proven-effective Interventions for Heart, Lung, and Blood Diseases and Sleep Disorders into Practice (STIMULATE-2) (R61/R33 Clinical Trial Required)⁹⁸
- [RFA-MH-20-400](#): Effectiveness of Implementing Sustainable Evidence-Based Mental Health Practices in Low-Resource Settings to Achieve Mental Health Equity for Traditionally Underserved Populations (R01 Clinical Trial Optional)⁹⁹
- [RFA-MH-20-401](#): Implementing and Sustaining Evidence-Based Mental Health Practices in Low-Resource Settings to Achieve Equity in Outcomes (R34 Clinical Trial Required)¹⁰⁰
- [RFA-NR-20-002](#): Strengthening the Impact of Community Health Workers on the HIV Care Continuum in the US (R01 Clinical Trial Optional)¹⁹

U.S. Department of Health and Human Services (HHS)	
	Ending the HIV Epidemic Initiative ⁶⁴
U.S. Department of Health and Human Services Office of Minority Health (OMH)	
	Interdepartmental Health Equity Collaborative (IHEC) ⁸⁶
	Youth Health Equity Model of Practice (YHEMOP) Program ⁷⁹
U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion (ODPHP)	
	Healthy People: Social Determinants of Health ²⁴
U.S. Department of Health and Human Services Office of the Surgeon General (OSG)	
	Executive Summary from Step It Up!: Surgeon General's Call to Action ¹⁰¹